

## IN THE CLAIMS

Please amend the claims as follows:

1 1. (currently amended) An ultrasound system comprising:  
2 a signal generating and receiving unit;  
3 a cableless coupling assembly, the cableless coupling assembly comprising  
4 intermediate elements coupled to electrical pads wherein the intermediate elements  
5 comprise electrically conductive particles, and is configured to attenuate sound; and  
6 an ultrasound transducing assembly coupled via the cableless coupling assembly  
7 to the signal generating and receiving unit wherein the ultrasound transducing  
8 assembly comprises:

9 at least one transducer configured to provide sufficient bandwidth for  
10 multiple frequency operation, the at least one transducer configured to be  
11 electrically matched to the signal generating and receiving unit.  
12

1 2. (currently amended) An ultrasound system comprising:  
2 ~~transducers having~~ at least one transducer configured to provide sufficient  
3 bandwidth for multiple frequency operation, the transducer comprising:  
4 acoustic transducing elements; and  
5 an acoustically isolating assembly connected to the acoustic transducing  
6 elements; and  
7 a signal generating and receiving unit connected to the acoustically isolating  
8 assembly wherein the transducers are directly connected to the signal generating and  
9 receiving unit via a cableless connector and the signal generating and receiving unit is  
10 electrically matched to the at least one transducer.  
11

1 3. (original) The system of claim 2 wherein the acoustic transducing elements include at  
2 least an acoustically active material between two electrical contacts.  
3

- 1 4. (original) The system of claim 3 wherein the acoustic transducing elements include  
2 an acoustic matching assembly coupled to one of the two electrical contacts and an  
3 acoustic window coupled to the acoustic matching assembly.  
4
- 1 5. (original) The system of claim 2 wherein the signal generating and receiving unit  
2 includes a motherboard.  
3
- 1 6. (original) The system of claim 2 wherein a filler material is placed within kerfs  
2 formed by the acoustically isolating assembly.  
3
- 1 7. (original) The system of claim 2 wherein the acoustically isolating assembly includes  
2 posts of an electrically conductive and acoustically attenuating material.  
3
- 1 8. (original) The system of claim 7 wherein the posts are anisotropic conductors.  
2
- 1 9. (original) The system of claim 7 wherein the posts are isotropic conductors.  
2
- 1 10. (withdrawn) The system of claim 2 wherein the acoustically isolating assembly  
2 includes insulating posts having conductors for conducting electrical signals.
- 1 11. (withdrawn) The system of claim 10 wherein the conductors are partially  
2 embedded within the posts.
- 1 12. (withdrawn) The system of claim 10 wherein the conductors are attached to the  
2 outside of the posts.
- 1 13. (withdrawn) The system of claim 10 wherein the conductors have an insulative  
2 backing that is coupled with the posts.

1 14. (withdrawn) The system of claim 10 wherein the conductors are longer than and  
2 extend beyond the posts.

3

1 15. (currently amended) An ultrasound system comprising:  
2 circuitry having a signal generating and receiving unit;  
3 acoustic transducing elements ~~that include~~ configured to provide sufficient  
4 bandwidth for multiple frequency operation, and electrically matched to the circuitry,  
5 the acoustic transducing elements comprising:  
6 an acoustically active material between two electrical contacts[[,]] ;  
7 an acoustic matching assembly coupled to one of the two electrical  
8 contacts[[,]] ; and  
9 an acoustic window coupled to the acoustic matching assembly;  
10 a cableless coupling assembly coupled to the signal generating and receiving unit  
11 and the acoustic transducing elements wherein a transducer is directly connected to the  
12 signal generating and receiving unit via a connector, ~~including at least~~ the cableless  
13 coupling assembly comprising:  
14 an acoustically isolating assembly having posts configured to be  
15 electrically conductive and acoustically attenuating, isolating the acoustic  
16 transducing elements; and  
17 a filler material placed within kerfs formed by the acoustically isolating  
18 assembly.

1 16. (original) The system of claim 15 wherein the posts are anisotropic conductors.

2

1 17. (original) The system of claim 15 wherein the posts are isotropic conductors.

2

1 18. (withdrawn) The system of claim 15 wherein the acoustically isolating assembly  
2 includes conductors for conducting electrical signals coupled to the posts.

1 19. (withdrawn) The system of claim 18 wherein the conductors are partially  
2 embedded within the posts.

1 20. (withdrawn) The system of claim 18 further comprising an acoustical index  
2 matching element.

1 21. (withdrawn) The system of claim 18 wherein the conductors are attached to the  
2 outside of the posts.

1 22. (withdrawn) The system of claim 18 wherein the conductors have an insulative  
2 backing that is coupled with the posts.

1 23. (withdrawn) The system of claim 18 wherein the conductors are longer than and  
2 extend beyond the posts.

1 24-47. (cancelled)

1 48. (currently amended) An ultrasound system comprising:

2 [[a]] signal generating and receiving means;

3 [[an]] ultrasound transducing means configured to provide sufficient bandwidth  
4 for multiple frequency operation, and electrically matched to the signal generating and  
5 receiving means;

6 ~~a-cableless~~ cableless coupling means connected to the signal generating and  
7 receiving means and to the ultrasound transducing means wherein the ultrasound  
8 transducing means are directly connected to the signal generating and receiving means  
9 via connection means, including

10 [[a]] means for acoustically isolating the ultrasound transducing means  
11 from the signal generating and receiving means, and

12 [[a]] means for conducting electricity; and

13 [[an]] acoustic backing means for attenuating acoustic reflections.